

REMARKS

In the November 19, 2003 Office Action, the Examiner noted that claims 1-18 were pending in the application; rejected claims 1-17 under the first paragraph of 35 U.S.C. § 112; rejected claims 1-18 under the second paragraph of 35 U.S.C. § 112; rejected claims 1-17 under 35 U.S.C. §103(a); and rejected claim 18 under 35 U.S.C. §102(b). In rejecting the claims, U.S. Patents 5,761,496 to Hattori; 5,371,807 to Register et al.; 6,233, 575 to Agrawal et al. (References A-C in the May 22, 2003 Office Action); and 6,061,675 to Wical (Reference B in the November 19, 2003 Office Action) were cited.

On page 4, line 4 of the November 19, 2003 Office Action U.S. Patent 5,761,498 was identified as Hattori. Since all other rejections based on Hattori indicate that U.S. Patent 5,761,496 was being cited, it will be assumed that U.S. Patent 5,761,496 was intended to be cited in item 6, not U.S. Patent 5,761,498.

Rejections under 35 U.S.C. §112

In item 3 on page 2 of the Office Action, claims 1-17 were rejected under the first paragraph of 35 U.S.C. § 112, although there was also a discussion of claim 18. The independent claims, other than claim 18, have been amended to use language closer to that found on page 19 of the application, although the words are not identical. It is submitted that the first paragraph of 35 U.S.C. § 112 does not require that the exact wording used in the claims can be found in the specification. "The question is not whether ... a word was used in the specification as filed, but whether there is support in the specification for employment of the term in a claim." *In re Anderson*, 176 USPQ 331, 336, 471 F.2d. 1237 (CCPA 1973). See also, *In re Oda*, 170 USPQ 268, 270 et seq. (CCPA 1971). It is submitted that claims 1-18 meet this test and therefore, withdrawal of the rejection is respectfully requested.

In item 4 on page 3 of the Office Action, claims 1-18 were rejected under the second paragraph of 35 U.S.C. §112 for indefiniteness. The amendments made to the independent claims, other than claim 18, include adding definitions of the terms hierarchical relation, equivalent relation and associative relation corresponding to the definitions provided in the specification which is where one of ordinary skill in the art would have looked for the definition of these terms as used in the claims previously presented. Therefore, it is submitted that even someone who has not read the specification would not find any of claims 1-17 to be indefinite.

Request for Examiner Interview

If the Examiner finds any indefiniteness or lack of support in the specification for the amended claims, the Examiner is respectfully requested to contact the undersigned by telephone to arrange an Examiner Interview prior to the next Office Action to discuss what additional amendments are needed to overcome any remaining rejections under 35 U.S.C. § 112. With respect to claim 18, as noted above, it was unclear whether claim 18 was rejected under the first paragraph of 35 U.S.C. § 112 and the last two lines of item 4 on page 3 of the Office Action did not provide sufficient information regarding why claim 18 was believed to be indefinite. Therefore, unless the rejection of claim 18 under 35 U.S.C. § 112 is withdrawn, it is respectfully requested that an Examiner Interview be scheduled to expedite the process of amending claim 18 to meet the requirements thereof.

Rejections under 35 U.S.C. §103

In item 6 on pages 4-5 of the Office Action, claims 1-17 were rejected under 35 U.S.C. §103(a) as unpatentable over Hattori. However, item 6 includes a discussion of Wical as well as Hattori. Therefore, it is unclear whether item 6 was intended to be a rejection based on Hattori alone. Furthermore, since claims 3-6 and 9 were rejected over the combination of Hattori in view of Wical "as applied to claims (sic) 2 above and further in view of Register et al." (Office Action, page 6, lines 10-11), it appears that Wical was intended to be included in the rejection set forth in item 6 and it is unclear whether claims 3-6 and 9 were intended to be rejected over the combination of Hattori and Wical. Given the lack of clarity in the November 19, 2003 Office Action, it is submitted that the next Office Action should not be made final.

The following five paragraphs assume that claims 1-17 were rejected under 35 U.S.C. § 103(a) taken alone, as stated in the first sentence of item 6. Following that is a discussion of how the present invention distinguishes over the combination of Hattori and Wical, with or without the addition of Register et al. or Agrawal et al.

Distinctions over Hattori alone

As discussed in the August 22, 2003 Amendment, Hattori discloses an information retrieval system in which the relations between keywords have already been defined in what is termed "background knowledge" (e.g., column 11, line 29). One of the problems addressed by Hattori is that typically much better search results are obtained when a user understands the background knowledge used by the information retrieval system (see, e.g., column 1 and 2). As described at column 11, lines 30-60, the information that the system taught by Hattori starts with

is illustrated in Fig. 3. "The background knowledge storage section 140 contains the conceptual hierarchy 310 of the attribute 1" (column 11, lines 41-43) which in the example is "fruit" having three terms lower in the hierarchy: "apple", "strawberry" and "pear". In addition, the background knowledge storage section contains an associative network 320 of attribute 2 which in the example is "price". The word "price" has an associative relation with the word "figure" that is assigned a relation value of 0.8 and in turn "figure" has been assigned relation values ranging between 0.4 and 0.6 to the words "fall", "cost", "fixed price" and "rise".

It is clearly stated in Hattori that the "user stores this type of associative network in the background knowledge storage section 140 for data attributes stored in the database 160" (column 14, lines 36-37). Two methods for calculating relation degrees between two words from relation degrees that have been assigned previously to all of the words is provided at the end of column 14 and first two-thirds of column 15. However, nothing has been cited or found in Hattori regarding how the original background knowledge is generated.

The independent claims have been amended to more clearly define hierarchical and associative relation, to add a definition of an equivalent relation and to clarify that the operation of generating "directory information for accessing the group of documents" uses "the extracting relation of the hierarchical relation, the equivalent relation and the associative relation as a link between the first and second keywords" (claim 1, lines 12-13). As discussed above, Hattori only discloses the accessing of documents, not the generation of directory information for the purpose of accessing the documents.

In addition, the term "association rule" as used in the claims and specification refers to the process illustrated in Figs. 10-15 and described at page 31, line 16 to page 38, line 8. The association rule "is extracted from pairs of a document and a set of keywords based on statistical information of a keyword pair" (page 32, lines 11-13). Thus, it is submitted that Hattori does not teach or suggest extraction of an "association rule" as that term is used in the application.

For the reasons set forth above, it is submitted that independent claims 1 and 15-17, as well as claims 2 and 10-14 which depend from claim 1 patentably distinguish over Hattori. The difference between the present invention and Hattori is indicated by claim 13 which recites that a document organizing apparatus according to the invention comprises an addition element "to access the directory information" (claim 13, lines 2-3) so that a user can access "the group of documents through the directory information" (claim 13, lines 4-5). All that is taught by Hattori is a unit to access information by a user. The elements recited in claim 1 are not taught by Hattori.

Distinctions over Hattori, Wical and Register et al. or Agrawal et al.

The addition of the teachings in Wical to those of Hattori adds "the use of cross referencing or cross linking ontologies to generate a very detailed hierarchical classification" (column 49, lines 60-62). However, contrary to the assertion in the Office Action, the cited portions of Wical do not disclose "**dynamic** classification" (Office Action, page 5, line 2, emphasis added), but rather "**static** ontologies" (emphasis added) which is a term used repeatedly in column 50, e.g., on line 47. Nothing has been cited or found in Wical suggesting "extracting one of a hierarchical relation, and equivalent relation and an associative relation between given keywords" (claim 17, lines 2-3) and then "generating directory information for accessing the group of documents by using the extracted relation" (claim 17, lines 10-11). Since similar limitations are recited in claims 1, 15 and 16, it is submitted that at least claims 1-17 patentably distinguish over the combination of Hattori and Wical. Furthermore, the dependent claims recite details of how the extraction occurs which are not consistent with a static classification system as taught by Wical. Therefore, it is submitted that the dependent claims further patentably distinguish over the combination of Hattori in view of Wical.

In item 8 on pages 6 and 7, claims 3-6 and 9 were rejected under 35 U.S.C. § 103(a) as unpatentable over Hattori in view of Wical and further in view of Register et al. In this rejection, the "intelligent inferencer module 34 in Fig. 3; column 5, lines 12-36; and column 11, lines 1-20 were cited. However, it was not explained why one of ordinary skill in the art would have found it obvious from the mere labeling of a block as a "intelligent inferencer module" to construct a "rule extracting unit [that] extracts a pair of keywords with a high cooccurrence frequency as the association rule" (claim 3, lines 2-3). What is described in column 5 appears to require a manual operation in which a class called "(DEVICE TYPE = DISK)" is included in the keyword class hierarchy 54.. It is unclear how the manual association of labels is at all related to "high cooccurrence frequency".

What is described on lines 1-20 of column 11 are operations that are performed if two categories "are potentially most similar categories" (column 11, lines 2-3) and a fact is deduced. There is no description of how the similarity is determined or the fact deduced. Claims 3-6 and 9 recite specific ways to extract, evaluate and assign relations. It is not seen how what has been cited in Register et al. would suggest to one of ordinary skill in the art the specific operations recited in these claims. Therefore, it is submitted that claims 3-6 and 9 further patentably distinguish over the combination of Hattori in view of Wical and Register et al.

In item 9 on page 7 of the Office Action, claims 7 and 8 were rejected under 35 U.S.C. § 103(a) as unpatentable over Hattori in view of Wical and further in view of Agrawal et al. As discussed in the August 22, 2003 Amendment, it has not been established that Agrawal et al. is prior art. Furthermore, despite the remarks in the August 22, 2003 Amendment, no specific teaching of Agrawal et al. was cited in the November 19, 2003 Office Action to support the assertions in item 9. Therefore, it is submitted that claims 7 and 8 patentably distinguish over the combination of Hattori in view of Wical and further in view of Agrawal et al. for the reasons discussed in the August 22, 2003 Amendment.

Rejections under 35 U.S.C. §102

In item 11 on page 8 of the Office Action, the Examiner rejected claim 18 under 35 U.S.C. § 102(b) as anticipated by Register et al. First, it is submitted that nothing has been cited in Register et al. suggesting that the lexicon 52 in Fig. 3 of Register et al. contains “documents” (claim 18, line 3), as opposed to “an alphabetical arrangement of the words in a language and their definitions: DICTIONARY” which is the definition of “lexicon” in Webster’s New Collegiate Dictionary, Copyright 1973, 1981. Second, the cited portions of Register et al. state that “the intelligent inferencer module 34 uses the keyword class hierarchy” (column 5, lines 12-13) and that the “fact inferencer module 60 follows a general method for attaching facts to keywords” (column 8, lines 35-36). Nothing was cited in Register et al. of how to obtain “an **initial** keyword hierarchy and an equivalent keywords list” (claim 18, line 4, emphasis added) Third, there was no explanation in the November 19, 2003 Office Action of where Register et al. discloses “extracting ... multiple ancestor hierarchical relations and associative relations based on statistical occurrence of ... keywords” (claim 18, lines 5-7). For all of these reasons, it is submitted that claim 18 patentably distinguishes over Register et al.

Summary

It is submitted that the references cited by the Examiner taken individually or in combination, do not teach or suggest the features of the present claimed invention. Thus, it is submitted that claims 1-18 are in a condition suitable for allowance. Reconsideration of the claims and an early Notice of Allowance are earnestly solicited.

Finally, if there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned to attend to these matters.

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If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,

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